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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/737,240

12/16/2003

Allen David Hertz

6355

31877

7590

09/25/2006

ALLEN D. HERTZ

12784 TULIPWOOD CIRCLE

BOCA RATON, FL 33428

EXAMINER

EDMONDSON, LYNNE RENEE

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,240

Applicant(s)

HERTZ ET AL.

Examiner

Lynne Edmondson

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/18/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The independent claim (21) teaches transferring vibrational energy through the air as the only option yet claim 25 teaches transferring vibrational energy via mechanically coupling the vibration source. Prior to the most recent amendment, both were option. With the most recent amendment, the independent claim teaches only air. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claim 21 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamikawa et al. (USPN 6119367).

Kamikawa teaches a method of cleaning an electronic assembly (wafer) by immersing in a washing fluid. Vibrational energy is transferred through air for drying (abstract, figure 5, col 8 lines 1-38 and col 10 lines 34-67).

6. Claims 21-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Asai et al. (USPN 5988060).

Asai teaches an apparatus and method of cleaning a stencil after screen printing (col 16 lines 35-50) by wiping with wet paper (col 28 lines 51-67 and col 41 lines 25-35) and applying ultrasonic vibration through air (col 26 line 58 – col 27 line 10) and the washing fluid. Fluid and vacuum are applied (col 27 lines 11-52 and col 37 lines 8-27). The apparatus comprises mechanisms for aligning areas, placing solder, cleaning the stencil and applying vibrational energy through air or a fluid medium (col 16 lines 35-50 and col 26 line 58 – col 3 line 65). The drying device is moved with the vibrator relative to the screen. Although the reference does not explicitly disclose drying the stencil, since vibrational energy is supplied to a screen which is not submerged, the vibrational energy would move a portion of the washing agent through the holes in the screen thereby partially aiding the drying process which follows (col 12 lines 50-62).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamikawa et al. (USPN 6119367) in view of Kobayashi et al. (USPN 6178974 B1).

Kamikawa teaches a method of cleaning an electronic assembly (wafer) by immersing in a washing fluid (col 10 lines 7-33). Vibrational energy is transferred through air for drying (abstract, figure 5, col 8 lines 1-38 and col 10 lines 34-67). However the cleaning process is not further disclosed.

Kobayashi teaches a method of cleaning an electronic assembly (wafer) by immersing in a washing fluid and applying vibrational energy as is conventional (figure 1 and col 2 line 45 –col 3 line 27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ ultrasonic vibration for cleaning as is known in the art. By using ultrasonics for both cleaning and drying, wafers can be cleaned thoroughly and quickly without use of dry gas or organic solvents (Kamikawa, col 1 lines 21-54).

Response to Arguments

9. Regarding applicant's argument that due to the holddown member 860, vibrational energy would not be allowed so as to be utilized in the drying process, see figures 12 and 18 which show only a small portion of screen 18 held by member 860 while the rest is in air. As previously stated, Asai column 12 lines 50-62 teaches vibrational energy applied in combination with air jets (col 12 lines 50-62) which would be capable of drying the screen. While moisture may be retained in the section held by member 860, the area just outside of the area, in air, would facilitate drying.

Therefore the 102 rejection of claims 21-40 as anticipated by Asai stands

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morinishi et al. (USPN 6260562 B1).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne Edmondson whose telephone number is (571) 272-1172. The examiner can normally be reached on Monday through Thursday from 6:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lynne Edmondson
Primary Examiner
Art Unit 1725

LE
7/20/06

LRE